

STEM Robotics  
Lesson Plan

**Session 2: Arduino**

**Learning objectives:**

Students will learn what an Arduino is and identify parts of an Uno  
Students will be introduced to code and libraries available for Arduino  
Students will set up Blink file and have the option of altering the light timing  
Students will be upload the Robot code onto their Arduino

**Class Outline:**

A. Welcome: Review of week 1 What is the purpose of:

- A. TinkerCad
- B. Thingiverse
- C. Cura

Questions? Comments? Files for print?

This week: Arduino- What is it?

What we will be doing: learning parts of and uploading code

Show Intro to Arduino video

B. Parts of diagram/ pass out Arduinos for student ID of parts on theirs

C. Code: What is it? Language that computers understand (compare to foreign languages)

Examples of: HTML, C, C+, Python, Scratch

Who has done some coding?

Arduinos understand C, C+

D. Open Arduino and talk about Sketch- set-up vs. loop sections and `*/ //`comments (purpose of)

E. Plug in Arduinos- Add Blink: Path- File > Examples> Basics> Blink

F. Verify and Upload to Arduino

G. Alter timing on code

H. Have students upload Robot code onto Arduino